marantz®

STEREO HIGH SPEED DUBBING DECK

Handbook of Instruction

Model SD463

ENGLISH

Warranty

For warranty information, contact your local Marantz distributor.

Retain your purchase receipt
Your purchase receipt is your permanent record of a valuable purchase. It should be kept in a safe place to be referred to as necessary for insurance purposes or when corresponding with Marantz.

Important
When seeking warranty service, it is the responsibility of the consumer to establish proof and date of purchase. (Your purchase receipt or invoice is adequate for such proof).

For UK only: This undertaking is in addition to a consumer's statutory rights and does not affect those rights in any way.

FRANÇAIS

Garantie

Pour les conditions de garantie, veuillez vous adresser à votre distributeur local.

Gardez votre bordereau d'achat.
Votre reçu d'achat est la preuve permanente de votre achat. Il doit être conservé soigneusement pour servir de référence ulterieure dans les cas nécessitant l'intervention de l'assurance, ou en cas de correspondance avec la société Marantz.

Important
Si le recours à la garantie est nécessaire, le consommateur doit fournir la preuve de l'achat et la date. Dans ce cas, le bordereau ou la facture servent de preuve.

DEUTSCH

Garantie

Bewahren sie Ihren Kassenzettel stets gut auf. Bei Inanspruchnahme der Gewährleistung kommt ihm eine wichtige Bedeutung, der Beweis des Kaufdatums zu.

NEDERLANDS

Garantie

Voor garantie kunt U zich tot uw lokale Marantz dealer wenden.

Bewaar uw kassabon
De kassabon is uw bewijs van een waardevolle aankoop. Het dient op een veilige plaats bewaard te worden, zodat U ernaar kunt verwijzen bij verzekeringskwesties of correspondentie met Marantz.

Belangrijk
Het overleggen van de aankoopbon kan belangrijk zijn wanneer U gebruik moet maken van de garantie - of service dienst.

ESPAÑOL

Garantia

Para informacion sobre la garantia consulte a su distribuidor Marantz.

SVENSK

Garanti

För upplysningar angående garanti, vänd dig till din lokala Marantz-distributör.

Behåll ditt inköpskvitto
Inköpskvittot är ditt bevis på ett värdefullt inköp. Det bör förvaras säkert för att kunna användas som referens vid garantiservice är det konsumentens ansvar att uppvisa på inköp och inköpsdatum. (Inköpskvitto eller faktura gäller som sådant bevis).

ITALIANO

Garanzia

Se desiderate informazioni relative alle condizioni di garanzia contattate la Marantz Italiana S.p.A. – Via Monte Napoleone 10-20121 Milano.

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ENGLISH : This unit meets the requirements of EEC Recommendation 82/499.
FRENCH : Cet appareil est conforme à la recommandation CEE 82/499.
SPANISH : Este aparato esta conforme a los requerimientos de la norma 82/499 de la CEE.
GERMAN : Dieses Gerät entspricht den Anforderungen der EWG Richtlinien 82/499.
DUTCH : Dit apparaat voldoet aan de in EEG publikatie 82/499 gestelde eisen.
ITALIAN : Questo apparecchio è conforme alla direttiva CEE 82/499.
SWEDISH : Enheten möter kraven av EG rekommendation 82/499.

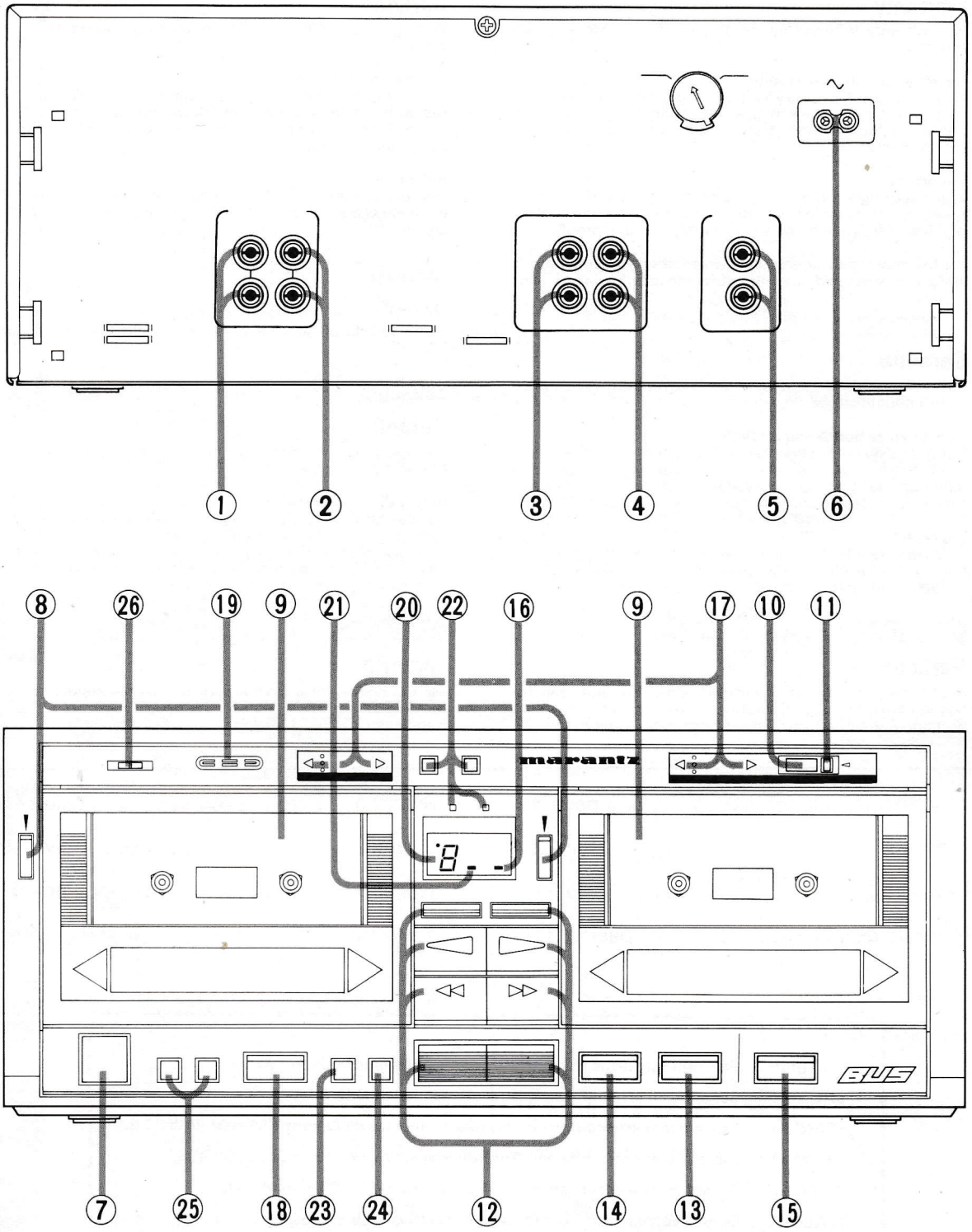
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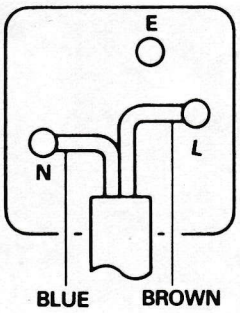
Figure 1

FOREWORD

Your Marantz product has been specially prepared to comply with the household power and safety requirements that exist in your region. This product has a 4-position voltage selector (110/120/220/240V) on the rear panel (A, N and T versions). Since the voltage has been adjusted as shown below upon shipment from the factory, please check the third alphabetical letter of the serial number and refer to the following table to note the characteristics of the model in your possession.

SUFFIX	VOLTAGE
A –	240V AC, 50/60 Hz
C –	120V AC, 60 Hz
U –	120V AC, 60 Hz
N –	220V AC, 50/60Hz
T –	240V AC, 50/60 Hz

FOR UNITS SOLD IN THE UNITED KINGDOM



The wires in the mains lead are colored in accordance with the following code:

Blue	– Neutral.
Brown	– Live

As the colors of the wires may not correspond with the terminal identification in your plug, proceed as follows:

- Connect the brown wire to the terminal marked "L" or colored brown or red.
- Connect the blue wire to the terminal marked "N" or colored blue or black.

For 13A plugs, conforming to BS1363, use a 3A fuse.

For other plugs, use a 5A or lower fuse in the plug or adaptor or at the distribution board.

NOTE FOR U.K.

Recording and playback of any material may require consent. For information, please refer to the:

Copyright Act 1956
Dramatic & Musical Performers Act 1958
Performers Protection Acts 1963 & 1972

and to any subsequent statutory enactments and orders.

ABOUT THIS MANUAL

Refer to the figures given on page 2. The callout numbers correspond to those found in this manual. All references to the connections and controls are printed in **BOLD FACE** type as they appear on the unit.

REAR PANEL CONNECTIONS

All connections to the rear panel should be made with the power to the entire system turned off. To avoid confusion, connect one cable at a time between the different components of your system. This is the safest way to avoid cross-connecting channels or confusing signal inputs with outputs.

(1) LINE OUT

Should be connected to the Tape Monitor inputs of your amplifier.

(2) LINE INPUT

Should be connected to the Tape output jacks of your amplifier.

(3) EASY OPERATION (E.O.) BUS TERMINAL

Connect Marantz stereo components equipped with **E.O.** bus terminals using the green bus cable. Pay attention to the color of the terminals when connecting the E.O. bus cable. Connecting it to terminals other than the specified may result in trouble.
The easy operation bus acts as a remote source selector for the amplifier. Therefore, you need not operate the source selector of the amplifier when you change and use source programs such as the tape and tuner.

(4) REMOTE CONTROL (R.C.) BUS TERMINAL

Connect the **R.C.** terminal of the tape deck to the R.C. terminal of the amplifier, tuner or audio timer using the orange bus cable. Pay attention to the color of the terminals when connecting the R.C. cable. Connecting it to terminals other than the specified may result in trouble. The REMOTE CONTROL BUS makes it possible to remote-control the TAPE 1 and TAPE 2 mechanisms, by switching the MECHANISM SELECT function of the SD463 using the TAPE 1 and TAPE 2 buttons in the cassette deck control section of the remote control unit. The following functions of the SD463 can be controlled from the remote control unit:

- Fastforward (>>), rewind (<<), stop (STOP), pause (PAUSE) for forward and reverse playback/recording.
- REC MUTE operation which makes non-recording section of four seconds on the tape being recorded.
- Repeat operation (one-program repeat).
- Memory operation (using PROG button).
- QMS operation for searching a desired program from a tape containing several programs (using QMS button or 0 to 9 buttons on the remote control unit).
- Index scan operation for playing the beginning of every tune in the tape for a 10 seconds while fast-forwarding the rest (using AMS CHANNEL button).
- Random program play for playing tunes in desired order.

For the remote control of the above operations of the SD463, infrared pulse is transmitted from the remote control unit towards the sensor window of the bus-compatible timer.

Functions

The following table shows which functions can be controlled on the SD463 or from the remote control unit.

Funktion	SD463	Remote Control Unit (RMC-15)
PLAY	○	○
EJECT	○	–
STOP	○	○
PAUSE	○	○
FF/REW	○	○
REC	○	○
REC MUTE	○	○
MECHANISM SELECT	○	○
MEMORY	○	○
QMS MUSIC SEARCH	○	○
RANDOM PLAY	○	○
1-TUNE REPEAT	○	○
NORMAL-SPEED/HIGH-SPEED DUBBING	○	–
NORMAL-SPEED/HIGH-SPEED RANDOM PROGRAM DUBBING	○	–
CONTINUOUS PLAY	○	–
INDEX SCAN	○	○
REVERSE MODE	○	–
TIMER PLAY/REC	○	–
SYNC. REC	○	–
DOLBY NR B-C	○	–

⑤ SYNC REC TERMINAL

If your turntable is equipped with synchronous recording jacks, they can be connected to these jacks on the tape deck to allow synchronous recording. With synchronous recording, the stylus on the tonearm comes in contact with the surface of the record, then stops automatically when the tonearm is lifted. The **SYNC REC** switch on the tape deck must be set to ON for this purpose.

⑥ AC POWER SOURCE CONNECTION

With the POWER switch set to the OFF position, plug the AC line cord into an AC outlet providing the proper voltage.

"WHILE BEING IN (OFF, STOP, **STAND BY**, OFF/SLEEP, STOP EJECT...) POSITION, THE UNIT IS NOT DISCONNECTED FROM THE AC MAINS"

I stilling OFF er apparatet stadig forbundet med lysnettet. Hvis det ønskes fuldstændig afbrudt skal netledningen trækkes ud.

FRONT PANEL FEATURES

⑦ POWER SWITCH

When despressed, supplies AC power to the unit.

⑧ EJECT BUTTON

To open the cassette compartment.

⑨ CASSETTE COMPARTMENT

⑩ TAPE COUNTER (TAPE 2 only)

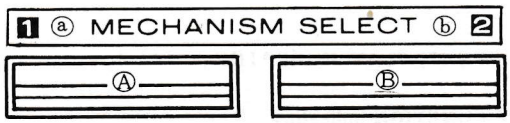
Can be used for easy reference and indexing of selections.

⑪ RESET BUTOON (TAPE 2 only)

To reset the **TAPE COUNTER** to "000".

⑫ MECHANISM CONTROL BUTTONS

- **MECHANISM SELECT 1 2 buttons. (with MECHANISM SELECT 1 2 indicators)**



Press to select the mechanism to be operated. Pressing button A selects the TAPE 1 mechanism and indicator ⓐ lights, and pressing button B selects the TAPE 2 mechanism and indicator ⓑ lights. (Selection is not possible when a mechanism is not loaded with a tape.)
In the dubbing mode, both indicators a and b light and both mechanisms can be operated regardless of the selection setting.
When the unit is stopped, the TAPE 2 mechanism is automatically selected.
When both teh TAPE 1 and TAPE 2 mechanisms are in the play or play-pause mode, the playback sound of the mechanism which has been selected is heard. When the selected mechanism is in the play-pause mode, sound is not produced even when the other deck is in the play mode.

STOP:
Pressing this button stops tape deck.

PLAY ▷ :
Pressing this button starts forward play.

◁ PLAY:
Pressing this button starts reverse play.

>>:
Pressing this button fastforwards the tape.

<<:
Pressing this button rewinds the tape.

PAUSE:
Pressing this button during playback or recording stops the tape deck without clearing the mode setting, and pressing it again causes playback or recording to be resumed. The LED above this button blinks while the deck is in the rec pause or play pause state.

⑬ REC BUTTONS (TAPE 1)

Press wither button to start recording.
When the **REC** button is pressed, the TAPE mechanism designated by the SELECT indicator enters the rec pause mode.
Recording is started by pressing the **PAUSE** button.

⑭ REC MUTE BUTTON

Pressing this button while the deck is in the record mode causes a 4 second blank space to be recorded, after which the deck enters the rec pause state.

⑮ CONTINUOUS PLAY BUTTON

Press for continuous playback of TAPE 1 and TAPE 2. When the **CONTINUOUS PLAY** button is pressed, the **CONT. PLAY** indicator lights to indicate the continuous play mode. This button can be pressed when both mechanisms are in the stop mode, or when the TAPE 1 mechanism is in the play mode while the TAPE 2 mechanism is in the stop mode.
This operation can be canceled by the **STOP** button or mechanism operation buttons.

⑯ CONT. PLAY INDICATOR

⑰ FUNCTION indicators

These indicate the direction of heads and the modes of mechanisms.
When the **POWER** switch is pressed to ON, the indicators corresponding to the head directions light.
When **PLAY** ▷ buttons is pressed, the head is set for the forward transport, and the ▶ indicator lights.
When ◁ **PLAY** button is pressed, the head is set for the reverse transport, and the ◀ indicator lights.
Before starting recording or dubbing, be sure to check the head direction setting by the these indicators.
The colored indicators show the mechanism's mode by their colors and lighting/flashing conditions.

Mechanism Mode	Color of FUNCTION Indicator	Lighting/Flashing Condition
STOP	Orange	Lighting
PAUSE	Orange	Flashing
PLAY	Green	Lighting
PLAY-PAUSE	Green	Lighting
REC	Red	Lighting
REC-PAUSE	Red	Flashing
REC MUTE	Red	Fast flashing
FF/REW	Orange	Lighting
ONE-PROGRAM REPEAT (during play)	Green	Slow flashing
AUTO PAUSE (during search)	Green	Fast flashing

⑱ ⑲ REVERSE MODE SWITCH AND INDICATORS

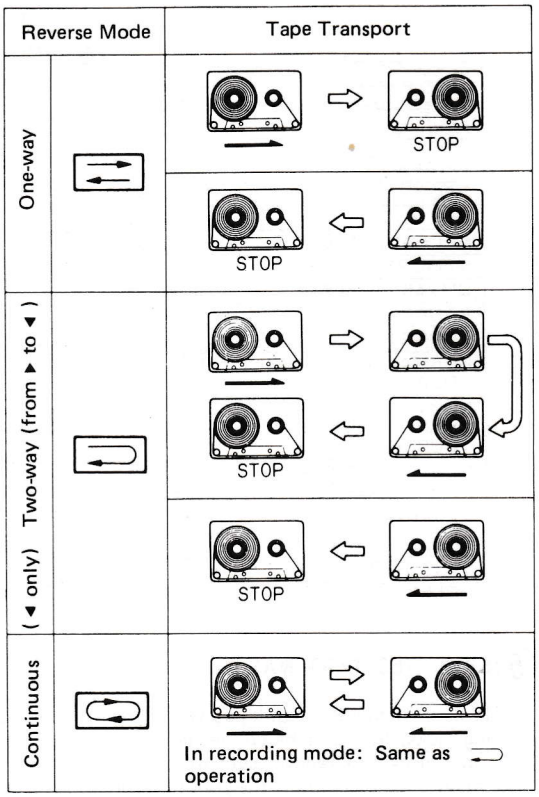
The tape transport mode can be selected with the **REVERSE MODE** switch.
After the power is turned on, the ⇄ mode is automatically selected and the indicator lights.
Each time the switch is pressed, the reverse mode is changed. The indicator corresponding the selected mode ⇄ ⇆ lights each time the **REVERSE MODE** switch is pressed.

The tape stops when the end of the tape is reached in both play and record modes.

Both side of the tape are played repeatedly. In the recording mode, the operation is the same as the mode.

In both play and recording modes, the direction of the tape travel is automatically reversed when the end of the tape is reached in the forward operation. The tape is automatically stopped when the end of the tape is reached in the reverse operation.

Auto-reverse Function
The auto-reverse function makes it possible to record or play the both sides of a cassette tape without reversing it.



- The deck does not enter the record mode when both of the erase protection tabs are removed.
- When the erase protection of side A is not removed and that of side B has been removed, and when the tape is recorded in the reverse mode, the tape stops at the end of side A after recording on this side.

⑳ QUICK MUSIC SENSOR INDICATOR

The number of tunes to be skipped using the QMS operation is indicated by a digital counter.
The indicated number increases each time QMS button is pressed.

9 programs | 15 programs | Position memory indication

- The **QMS** button is pressed even when the **QMS** indicator is displaying the position memory condition, and the indication varies according to the pressing.

㉑ MONITOR INDICATOR

The indicator lights in proportion to:
TAPE 1 or TAPE 2 output level during playback, TAPE 2 recording level during recording, and TAPE 1 playback output level during dubbing.

(22) DUBBING BUTTONS (SYNC. DUBBING NORM/HIGH) DUBBING SPEED INDICATORS (DUBBING SPEED NORMAL/HIGH)

Press for synchro-dubbing from TAPE 1 to TAPE 2. When the **NORM** button is pressed, the **NORMAL** indicator lights and normal-speed dubbing starts.

When the **HIGH** button is pressed, the **HIGH** indicator lights and high-speed dubbing starts, enabling to halve the normal dubbing time.

The buttons are pressed when both mechanisms are in the stop mode.

Continuous dubbing from side A to side B is also possible.

(23) QMS BUTTON

Used to select a selection recorded on the cassette. In stop, play or pause mode, press this button the number of times corresponding to the number of selections to be skipped. When this button is pressed in stop mode, determine the tape playback direction. To skip backward in the forward direction, press the << button. To skip forward, press the >> button. In the reverse direction, press the opposite button. The maximum number of selections that can be skipped is 15. To skip forward in the forward direction, the current selection should be counted.

- **Auto-pause standby**
  When the **PAUSE** button is pressed during QMS operation, the mechanism enters the play-pause mode after the beginning of the tune has been searched.

(24) MEMORY BUTTON

This button is used to store the current tape location in memory. Storing the current tape location is usefu to listen to the current selections repeatedly or to listen to a selection immediately after recording.

After pressing this button, play or record a selection. When play or recording is completed, press the >> or << button to rewind the tape, then the tape is automatically rewound to the position stored in memory and stops.

When the **MEMORY** button is pressed several times, the tape location at the time it is pressed last is stored in memory.

(25) DOLBY NR SWITCHES

When recording using Dolby Noise Reduction or playing tape recorded using Dolby Noise Reduction, set the **ON/OFF** switch to ON and select the **B** or **C** NR.

(26) SYNC REC/TIMER SWITCH

- **SYNC REC switch**
  This function is used for synchro-recording between a turntable (bus-compatible model) equipped with a synchrorecording terminal and the SD463 via the **SNYC REC** terminals on the rear panel.
  For details, see item "(5) SYNC REC TERMINAL".

- **TIMER mode switch**
  This function is used for recording or playing using an audio timer. For details, refer to section "TIMER RECORDING AND PLAYBACK".

PLAYBACK

- **One-Mechanism Playback (common for TAPE 1 and TAPE 2)**

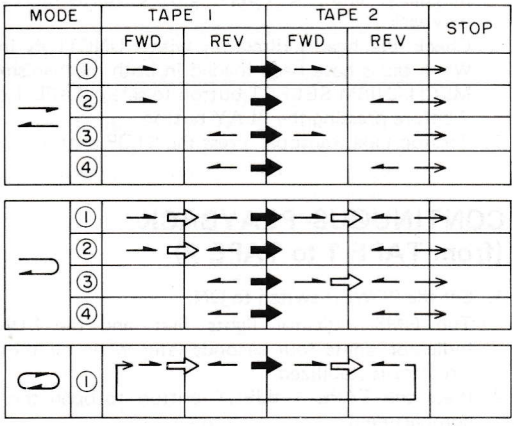
1. Set the **POWER** switch to ON.
   The **QMS** indicator lights first, and the **FUNCTION** indicator lights 4 seconds later when all the internal circuitry is stabilized.
2. Press the **EJECT** button to open the cassette compartment.
3. Load the tape to be played with the side to be played facing towards the front, and close the compartment.
4. When the tape was recorded using Dolby NR, press the **DOLBY NR** buttons to select **B** or **C.**
5. Press the **RESET** button to reset the **TAPE COUNTER** to "000" (only when using TAPE 2).
6. Press the PLAY button. (The FUNCTION indicator will light.) (Press the **PLAY** ▷ button for forward-direction playback, and ◁ **PLAY** button for reverse-direction playback.)
   Check the head's direction with FUNCTION indicator. When tapes have been loaded in both mechanism, press a MECHANISM SELECT button to select TAPE 1 or TAPE 2 before pressing the PLAY button.
7. To stop tape transport, press the STOP button.

CONTINUOUS PLAYBACK (from TAPE 1 to TAPE 2)

1. Set the POWER switch to ON.
   The QMS indicator lights first, and the FUNCTION indicator lights four seconds later when all the internal circuitry is stabilized.
2. Press the TAPE 1 EJECT button to open the cassette compartment.
3. Load the tape to be played with the side to be played facing towards the front, and close the compartment.
4. On TAPE 2, load the tape to be played with the same procedure as for TAPE 1 (with steps 2 and 3).
5. When the tapes have been recorded using Dolby NR, press the DOLBY NR buttons to select B or C.
6. Press the RESET button to reset the TAPE COUNTER to "000" (only with TAPE 2).
7. Press SELECT 1 button to select the TAPE 1 mechanism and press the PLAY button (FWD PLAY button for forward-direction playback and REV PLAY button for reverse-direction playback).
   * The operation of step 7 is not necessary when the desired direction has already been set.
8. Press the CONTINUOUS PLAY button.
   (When the operation of step 7 was not performed, the MECHANISM SELECT 1 indicator lights by this operation, and the TAPE 1 mechanism enter the play mode.)
9. When the tape in TAPE 1 has been played, playback of the tape in TAPE 2 starts automatically. The head of TAPE 2 should previously be set for the desired transport direction similarly to TAPE 1.
10. To cancel the continuous playback mode, press one of the following buttons: The mechanism enters the mode selected by the button.
    When the MECHANISM SELECT indicator for the mechanism in the play mode is lit: STOP, FF, REW, QMS, PLAY (the button for the same direction as head direction).
    When the MECHANISM SELECT indicator for the mechanism in the stop mode is lit: STOP, FF, REW, PLAY, REC, QMS.

- To re-start continuous playback after canceling continuous playback, start operation from step 7.
- The CONTINUOUS PLAY button is pressed when both the TAPE 1 and TAPE 2 mechanisms are in the stop mode, or when one is in the play mode and the other is in the stop mode.

11. For continuous playback from TAPE 2 to TAPE 1, play TAPE 2 first, then operate buttons in the same way as for the continuous playback from TAPE 1 to TAPE 2. (This is possible only when the reverse mode is ⇄ .)
    - Endless playback of two tapes is also possible by combining the reverse modes. See also item "CONTINUOUS PLAY BUTTON".
    - Combination of reverse modes and continuous playback Endless playback of two tapes is possible by combining the reverse modes. See the following table for desired continuous playback operation.



→ : Tape transport from left to right.
← : Tape transport from right to left.
➡ : Transport from TAPE 1 to TAPE 2.
⇨ : Reversal of TAPE 1 or TAPE 2.
⟶ : Stop of all operations.

RECORDING

• One-Mechanism Recording (TAPE 2 only)

1. Set the **POWER** switch to ON.
   The **QMS** indicators lights first, and the **FUNCTION** indicator lights four seconds later when all the internal circuitry is stabilized.
2. Press the TAPE 2 **EJECT** button to open the cassette compartment.
3. Load a non-recorded tape with the side to be recorded facing towards the front, and close the compartment.
   Before loading, wind the leader section of tape until the magnetically-coated section.
4. When recording using Dolby NR, press the **DOLBY NR** buttons to select **B** or **C**.
5. Press the **RESET** button to reset the **TAPE COUNTER** to "000".
6. Press the **REC** button.
   The red **FUNCTION** indicator flashes to indicate the record-pause mode. (Also check the head direction indicator and, if the other direction is required, press the PLAY button for the desired direction: The head direction is switched without changing the record-pause mode of the mechanism.)
7. To start recording, press the **PAUSE** button.
8. To stop tape, press the **STOP** button.

DUBBING (From TAPE 1 to TAPE 2)

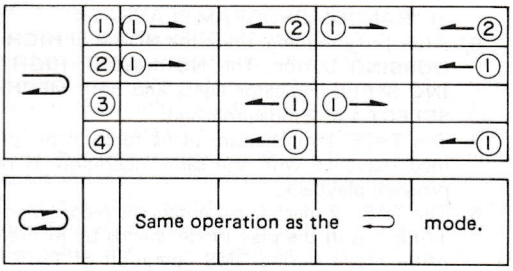
Tape dubbing is possible from TAPE 1 to TAPE 2, in the normal-speed dubbing, normal-speed random-program dubbing, high-speed dubbing and high-speed random-program dubbing modes. The high-speed dubbing and high-speed random-program dubbing allow to halve the dubbing time compared to normal speed dubbing modes.

1. Normal-Speed Dubbing

Synchro-dubbing from TAPE 1 to TAPE 2 is possible by using the **NORM** button. When the dubbing of side A is over, the tape transport is reversed, and dubbing of side B starts. This simple operation enables the continuous dubbing from side A to side B. (See Figure 2 on page 66.)

1. Load the tape to be played in TAPE 1 and that to be recorded in TAPE 2. Make sure of the following points with the tape to be recorded.
   - The erasure protection tabs should not be broken.
   - Use the same length of tape as that of tape to be played as far as possible.
     If the tape lengths are different, dubbing could end before the end of music.
2. When dubbing both sides A and B, press the << button to rewind tapes to the beginnings before dubbing.
   Even when the two tapes are rated as the same length, the lengths of the leader sections may vary with different manufactures. To not to cut music when dubbing between such tapes, wind the leader sections up before starting dubbing.
3. Press the **NORM** button. TAPE 1 starts playback, TAPE 2 starts recording, and normal speed dubbing from TAPE 1 starts. The "DUBBING SPEED" NORMAL indicator lights to indicate the dubbing mode.
4. When dubbing of side A finishes, the head is reversed for dubbing of side B. Even when one head is reversed, dubbing of side B does not start until the other head is reversed.
   As dubbing of side B is designed to start simultaneously, the beginnings of TAPE 1 and TAPE 2 become the same even when their lengths are different.
5. When the PAUSE button is pressed in the middle of dubbing, the TAPE 2 mechanism enters the record-puase mode. When the REC MUTE button is pressed during dubbing, a non-recorded blank of four seconds can be recorded. These functions make it possible to edit original tapes by dubbing only the required programs.
6. Button operations other than the <<, **PAUSE, MEMO, STOP** and **MODE** buttons are not pressed during dubbing. To stop dubbing in the middle, press the **STOP** button. Dubbing is canceled and both the TAPE 1 and TAPE 2 mechanisms enter the stop mode.
7. Dubbing of only one side, A or B, is possible by combining the reverse modes.

MODE		TAPE 1		TAPE 2	
		FWD	REV	FWD	REV
→ ←	①	→		→	
	②	→			←
	③		←	→	
	④		←		←



2. High-Speed Dubbing

HIgh-speed synchro-dubbing from TAPE 1 to TAPE 2 is possible by pressing the HIGH button. The "**DOBBING SPEED" HIGH** indicator lights to indicate the high-speed dubbing mode. Other operations are the same as the normal-speed dubbing.

Note:

The PAUSE button is not pressed during high-speed dubbing.

3. Normal-Speed/High-Speed Random-Program Dubbing

Dubbing from TAPE 1 to TAPE 2 is possible while changing the order of tunes.

A sequence of up to 16 tunes can be programmed from among is 15 tunes. After storing the sequence of tunes, press the **NORM** or **HIGH** button to start normal-speed or high-speed dubbing.

For detail, see item "RANDOM-PROGRAM DUBBING" in section "OPERATION USING MICRPROCESSORS".

- The played sound of TAPE 1 is recorded with the same level on TAPE 2, regardless of the Dolby NR setting.
  When the tape of TAPE 1 has been recorded using Dolby NR, the tape in TAPE 2 is recorded with Dolby NR, regardless of the ON/OFF setting of the **DOBLY NR** buttons.
- During dubbing, the TAPE 1 sound is played with Dolby NR OFF mode, regardless of the ON/OFF setting of the **DOLBY NR** buttons.
- Monitoring of sound is possible during dubbing.
- The easy auto-stop operation is not executed during dubbing. To listen to the sound of another system, switch the amplifier's function switch with the normal (EASY) operation.

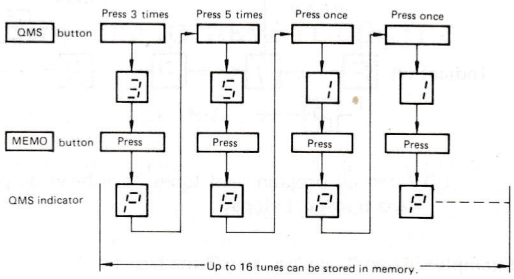
MICROPROCESSOR

This unit incorporates two 2K-byte microprocessors for the mechanism control and digital counter control.

Operations using microprocessors

- **Random-Program Playback**
  Desired tunes can be played in desired sequence.
  A sequence of up to 16 tunes can be programmed from song 15 tunes. By programming one tune several times, repeated playback is possible for the desired number of times.
  1. Load the tape to be played in the cassette holder and press the MECHANISM SELECT button to select the tape mechanism to be played.
  2. Program the tune sequence as follows.
     (1) Press the QMS button to select a desired tune. The QMS indicator displays the number. (Maximum 15)
     (2) Pressing the MEMO button stores the tune selected by (1) in memory. The QMS indicator displays "P" to indicate that a tune has been stored in memory.
     (3) Store desired tunes in a desired sequence, by repeating steps (1) - (2) - (1) - (2) ... (Up to 16 tunes can be stored in memory.)

Example: Tune No. 3 — Tune No. 5 — Tune No. 1 — Tune No. 1

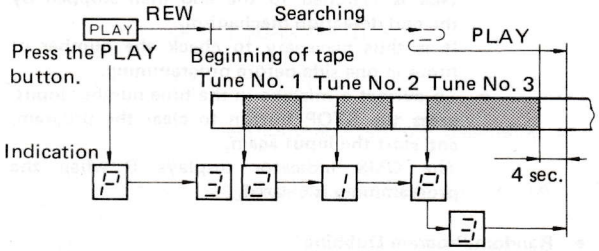


(4) When the desired tunes have been programmed, press the **PLAY** button. Press the **PLAY** ▷ button for playing in the forward direction and ◁ **PLAY** button for reverse direction.

	Indication
(▶) Forward direction	FWD PLAY
(◀) Reverse direction	REV PLAY

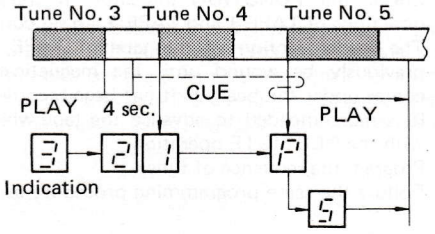
(5) The mechanism automatically starts reqinding until the beginning of tape. When it is detected that the tape has completely been rewound, the QMS operation starts to search the first tune in the programmed sequence. The **QMS** indication decreases by "1" each time a tune is detected. When the desired program has been searched, the indication becomes "P" to indicate that the desired tune has been searched. Then, one second later, it changes to the No. of the searched tune, and playback starts.

Example: Searching Tune No. 3

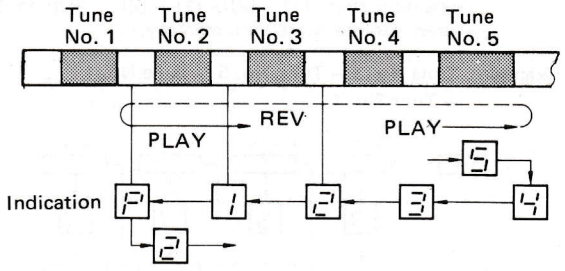


(6) When the first tune in the sequence has been played, the indication changes to the number of tunes to be skipped before seraching the next tunes, and the QMS operation starts again.
The indication decreases each time a tune is detected as in step (5), and becomes "P" when the desired tune has been searched. Then, one second later, it changes to the No. of the searched tune, and playback starts.

Example: From Tune No. 3 to Tune No. 5

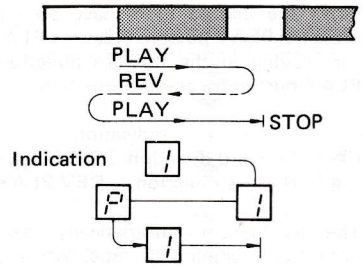


Example: From Tune No. 5 to Tune No. 2



(7) When all programmed tunes have been played, the tape transport stops.

Example: From Tune No. 1 to Tune No. 1



NOTES:

- **During random-program playback, additional tunes cannot be stored in memory by pressing the QMS button.**
- **The QMS button is not pressed after 16 tunes have been stored.**
- **Random-program playback is possible for only one side. When a tune beyond the number of tunes in one side has been programmed, the tape is searched to the end then stopped by the end detection mechanism.**
  It is thus necessary to check the number of tunes in one side before programming.
- **To correct a mistake in the tune number input, press the STOP button to clear the program, and start the input again.**
  The QMS indicator displays 0 when the programming is cleared.

- **Random-Program Dubbing**

Dubbing from TAPE 1 to TAPE 2 is possible while playing desired tunes in a desired sequence. A sequence of up to 16 tunes can be programmed from among 15 tunes.
After storing the sequence of tunes, press the **NORM SYNC. DUBBING** button to start normal-speed random-program dubbing, or **HIGH** button to start high-speed random-program dubbing which allows to halve the time for re-arranging the order of tunes in a tape.

1. Load the tape to be played in the TAPE 1 cassette holder.
2. Load the tape to be recorded in the TAPE 2 cassette holder.
3. Check the **FUNCTION** indicators if the transport directions of TAPE 1 and TAPE 2 are set correctly.
4. The leader section of the tape of TAPE 2 should previously be wound until the magnetically-coated comes under the head. If it has been recorded before, it is recommended to advance the tape while erasing with the REC MUTE operation.
5. Program the sequence of tunes.
   Follow the same programming procedure as in step 2. of "RANDOM-PROGRAM PLAYBACK".
6. After programming, press the **NORM** of **HIGH SYNC. DUBBING** button. The **NORMAL** or **HIGH DUBBING SPEED** indicator lights and both **MECHANISM SELECT 1** or **2** indicators light.
7. The TAPE 1 mechanism plays tunes in the programmed sequence with the same operation as random-program playback.
8. The TAPE 2 mechanism enters the record mode when TAPE 1 is in the play mode, stands by in the record-pause mode during QMS operation of TAPE 1, and re-starts recording when TAPE 1 re-starts playback.
9. When all the program tunes have been played, both mechanisms stop tape transport.

NOTES:

- **During random-program dubbing, additional tunes cannot be stored in memory by pressing the QMS button.**
- **The QMS button is not pressed after 16 tunes have been stored.**
- **Random-program dubbing is possible for only one side. When a tune beyond the number of tunes in one side has been programmed, the tape is searched to the end then stopped by the end detection mechanism.**
  It is thus necessary to check the number of tunes in one side before programming.
- **Operation buttons, except STOP, are not pressed during random-program dubbing.**

- **Quick rewind**

When the << or >> button is pressed without pressing the **STOP** button after recording, the tape returns to the position where the recording was started, and the deck enters the play pause mode.

- **One-program repeat**

The tune being played can be played repeatedly.
Select the mechanism to be operated, which is the mechanism presently in the play mode, with the **MECHANISM SELECT 1** or **2** button, and press the **PLAY** button for the same direction as the present playback.
The green **FUNCTION** indicator flashes slowly to indicate the one-tune repeat mode.
Pressing the **PLAY** button again cancels the one-tune repeated playback.
Simultaneous repeated playback on TAPE 1 and TAPE 2 is not possible.

- **Auto-pause**

When the **PAUSE** button is pressed during QMS operation, rewinding or search of random-program playback, or search of one-tune repeated playback, the green **FUNCTION** indicator flashes rapidly and the mechanism enters the play-pause mode when the beginning of the searched tune is researched.
Pressing the **PAUSE** button again starts playback.

- **Other operations**

As the deck mechanisms of this unit are operated by two independent microprocessors, the mechanisms can be controlled and operated independently.

Examples

- While one mechanism is in the play mode, the other can fast wind a tape with fast forward or rewind mode.
- By setting one mechanism in the random-program play mode and the other in the play mode, music can be played without break even when one mechanism is searching the next tune to be played by random-program playback. (Set the **MECHANISM SELECT** switch for the mechanism in the random-program play mode.)

NOTES:

- **Operation modes which include searching, such as the random-program playback, one-tune repeat, QMS and index scanning (remote-control operation), cannot be operated simultaneously on TAPE 1 and TAPE 2.**
- **When one mechanism is in the search operation, the other mechanism does not accept the QMS, one-tune repeat and index scanning (remote-control operation).**
- **When the QMS, one-tune repeat or index scanning (remote-control operation) is operated for one mechanism while the other mechanism is in the QMS display mode or one-tune repeat mode, the QMS display or one-tune repeat mode is canceled. (The QMS display is cleared to "0", and the one-tune repeat playback is canceled and normal playback starts.)**

TIMER RECORDING AND PLAYBACK

(For connection, refer to Figure 3 on page 67.)

Timer recording

When an audio timer is connected, radio broadcasts can be recorded even when you are not in.

1. Set the timer for ON and set the **TIMER** switch of the deck to OFF.
2. Turn on the power of the stereo system and tune the tuner for the radio station to be recorded.
3. Press the **POWER** switch to ON and load a cassette tape in the TAPE 2 cassette compartment.
   With this unit, it is not necessary to adjust the recording level.
4. Set the **TIMER** switch to **REC.**
5. Set the timer for auto operation and set the on and off times.
6. When the time set by the timer is reached, all the powers are turned on and recording is started. When the tape has been wound to the end, the shut off function operates to stop the tape transport, then the timer operates to turn off the power of the deck and stereo system.
   If the off time set by the timer is reached before the tape is wound to the end, the timer shuts the deck and stereo system power off.

* The initial setting for the reverse mode is ⇄ every time when the power is tuned ON. Therefore, to record only one side of the tape, the cassette should be loaded so that the side to be recorded comes on the back side, and the tape transport should be set for the reverse direction.

NOTE:

With some audio timers, the power is automatically turned off 59 minutes after it was tuned on, even when the stop time has not been set. For details, read instructions provided with the audio timer.

Timer playback

1. Turn on the timer and set the SD463's **TIMER** mode switch (REC/OFF/PLAY) to **OFF** (center).
2. Timer playback is effective for both TAPE 1 and TAPE 2. Load the tape to be played in one of the mechanisms.
   When tapes are loaded in both of them, continuous playback from TAPE 1 to TAPE 2 will start automatically.
3. Turn on the powers of the stereo system and SD463, and adjust the playback level of the tape to be played.
4. Set the **TIMER** mode switch (REC/OFF/PLAY) to **PLAY.**
5. Set the timer for the auto operation, and adjust the start and stop times.
6. The powers of all components turn on when the time set by the timer wound to the end, the auto-shutoff function operates to stop the tape transport, and the powers of the deck and stereo system will later be turned off by the timer.

NOTE:

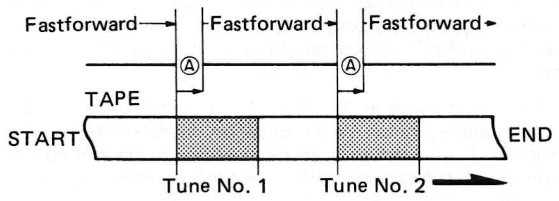
When the TIMER switch is left to REC although timer recording is not necessary, recording will start when the power is turned on. To prevent this, be sure to set the TIMER switch to OFF unless you use a timer for recording in your absence.

FUNCTION USING REMOTE-CONTROL UNIT

Index Scanning (AMS CHANNEL button)

When this button is pressed while in the play or stop mode, the beginning of the next tune is played for about ten seconds, then the beginning of the subsequent tune is also played for about 10 seconds after fast forwarding the tape.
The above operations are performed repeatedly. When the desired tune is fund, press the **PLAY** button for the same direction as the present index scanning: The tune and subsequent tunes are played by normal playback.
When the >> button is pressed during forward-direction index scanning, the tape is fast forward to the subsequent tune. When the << button is pressed during forward-direction index scanning, the tape is rewound to the beginning of the tune being played, and index scanning continues.
Press the opposite buttons during reverse-direction index scanning.

When the **PAUSE** button is pressed during fast forward operation, the auto-pause operation starts and the mechanism enters the play-pause mode at the beginning of the next tune. Pressing the **PAUSE** button again resumes the index scanning.



Ⓐ: Playback for 10 sec.

- This feature is useful for playing only desired tunes in a tape.
  Three types of operations are possible depending on the reverse mode setting.

⇄ : Index scanning ends at the end of one side (A or B) of tape.

⇄ : Index scanning continues from side A to side B by reversing the transport direction automatically at the end of side A, and ends at the end of side B.

⇄ : Index scanning continuous endlessly by reversing the transport direction at the end of each side, until it ends when the PLAY or STOP button is pressed.

DOLBY B AND DOLBY C NOISE REDUCTION SYSTEM

DOLBY B NR

The Dolby B Noise Reduction system increases the level of the low volume mid and high frequency signals during recording and reduces the level of these signals by an identical amount during playback. As a result the playback signal is identical to the original source signal but the level of tape hiss is reduced.

DOLBY C NR

The Dolby C Noise Reduction system is similar to the B type. In the C system, however, as the range to be increased and decreased during recording and playback are considerably extended, the level of tape hiss reduced.

PROPER RECORDING LEVEL

A.L.C. RECORDING SYSTEM

As the SD463 is equipped with an A.L.C. recording system which automatically sets the optimal recording level, there is no need to adjust the recording level by trouble-some adjusting of recording level volume.

TO CLEAN HEADS

The record/play and erase heads are the most important parts of the cassette deck. As the tape rubs against the heads during record and playback brown oxide deposits from the tape accumulate on the heads, guide and pinch roller. Even the best cassette tapes will shed some particles of oxide. The accumulation of this oxide will cause loss of high frequency response, loss of sound volume, intermittent sound dropout and unsatisfactory result when recording or erasing the heads. If the oxide is allowed to build up, it may cause the heads to wear out prematurely, causing permanent damage.

Open the cassette compartment by pressing the **EJECT** button. Clean the heads using a cotton sticks as shown in Figure 4 on page 67.

To clean the tape path, use cotton swabs and methylated sprit (available at any pharmacy). Please note that common "rubbing alcohol" should not be used because of its water content.

Dip the cotton swab in the alcohol and clean the tape heads, capstan, guides, pinch roller until no more oxide can be picked up. If you can see a stripe of brown oxide around the perimeter of the pinch roller, it is time to clean the enter tape path.

AUTO TAPE SELECTOR

This unit is equipped with auto tape selector which automatically sets the bias and equalizer level using the detection holes provided in the cassette shell. The bias and equalizer level is automatically set according to the type of cassette as follows. (See Figure 5 on page 67.)

- Normal tapes : EQ; 120 μS, Bias; Low
- CrO_2 tapes : EQ; 70 μS, Bias; High
- Metal tapes : EQ; 70 μS, Bias; Metal

In some metal cassette, the metal detection holes are not provided. With these cassettes, the CrO_2 TAPE SELECTOR indicator lights up and the recorded sound may be distorted.

MAKING OPTIMUM CASSETTE RECORDINGS

TYPE AND BRAND OF TAPES TO USE

In cassette recording, the type and brand of cassette you use has a great influence on the quality of your recordings. Therefore, it is advantageous to purchase the highest quality cassette available. Chromium dioxide (CrO_2) and metal tapes generally provide better fidelity than normal ferric oxide tape.

We recommend the use of cassettes with a recording capacity of 90 minutes or less. In production, the performance of our cassette decks is tested using the following tapes:

Type of Tape	Ref. No.	Market Name
Normal	TDK AC212 (C-60)	TDK D
Special/CrO_2	TDK AC512 (C-20)	TDK SA
Metal	TDK AC712 (C-60)	TDK MA TDK MAR

TO PROTECT VALUABLE RECORDINGS

In the record mode, information previously recorded on the tape will automatically be erased. To prevent this from happening, use a small screwdriver to break out one or both safety tabs (see Figure 6 on page 68 for side A). It is possible to restore the recording capability of either side of the cassette by covering the opening with cellophane tape (see Figure 7 on page 68 for side A).

NOTES ON INSTALLATION

When the deck is installed on or near other audio equipment hum sometimes occurs. Position the equipment so that the hum ceases. Always install the unit horizontally.

This model incorporates a microprocessor with high performance. In case of any malfunction due to staticelectricity, etc., please turn off the POWER switch, and after 30 seconds turn it on again.

REPAIRS

Only the most competent and qualified technicians should be allowed to service your amplifier. The Marantz company and its factory trained service personnel have the knowledge and the necessary equipment needed for repair and calibration of this precision instrument.
In the event of difficulty please refer to your local dealer or write directly to the Marantz Authorized Service Station nearest you. The names and addresses are listed on the back page. Please include the model and serial number of your unit together with a full description of what you feel is abnormal it its behavior.

REPACKING FOR SHIPMENT

Should it become necessary to repack your Stereo Cassette Deck for shipment to the factory, to an authorized service station, or elsewhere, please observe the following precautions:

a. Pack the unit carefully, using the original material as shown in Figure 8 on page 68.

b. Ship via a reputable carrier (do not use Parcel Post) and obtain a shipping receipt from the carrier.

c. Insure the unit for its full value.

d. Be sure to include your return address on the shipping label.